REMARKS/ARGUMENTS

Reconsideration of this application is respectfully requested.

The rejection of claims 23-42 under 35 U.S.C. §102 as allegedly being anticipated by Hacherl '571 is respectfully traversed.

The Examiner is again thanked for providing the helpful "response to arguments" section bridging pages 4-6 in the last office action.

Applicants have, of course, never asserted that Hacherl fails to disclose a plurality of domain controllers, each of which holds a replica of a directory service or collection of objects. Indeed, applicants start the argument at page 10 of the last submission with the recognition that Hacherl does disclose this. However, the applicants also have noted that each domain controller in Hacherl only replicates data in response to a request from another domain controller. See, for example, col. 7, lines 27-57, which explicitly explains that the replication process in Hacherl operates on a "pull model." According to this model, for a replication to occur, one domain controller must send a request for replication to a second domain controller – and the response causes the entirety of the object in question to be merely replaced (rather than having some portion of it updated). See, for example, col. 7, lines 58-62. Indeed, this entire replacement of an object rather

than piecemeal updating of some portion of the object is specifically touted as an advantage of the Hacherl approach (e.g., see again the cited passage at col. 7).

In that context, Hacherl certainly does not provide any way to guarantee that each domain controller holds a plurality of data objects, each of which is a duplicate of an object on another domain controller. While the Hacherl replication process may result in a plurality of domain controllers, each holding an object which is a duplicate of that on the other of that plurality of controllers, the particular sub-set of controllers that might at any one time contain a duplicate of the same object appears to be uncontrolled and changing – depending upon which controllers happen to request the replication process and when they might request it. Accordingly, merely because Hacherl discloses both the use of objects and the duplication of such objects between domains does not answer applicants' earlier arguments.

With respect to whether Hacherl discloses displaying entities on a visual display that are each defined by the data portion of a data object, the Examiner refers to col. 8, lines 30-41, which teaches that the Hacherl directory service may be implemented on the Microsoft Windows NT® operating system. However, this does not teach or suggest that any portion of the active directory architecture being maintained by Hacherl will actually be displayed on a visual display to a user. There are many aspects of an operating system

that are never (or least not normally) displayed to a user in a visual display. Accordingly, although use of the Windows NT® operating system does reasonably imply that something will be displayed to a user, there is no teaching here that the maintained data objects will define displayed entities in a visual display.

With respect to applicants' earlier argument that Hacherl only replaces an entire object rather than update some portion of the object, the Examiner has suggested that the pending claims were sufficiently broad that they could be interpreted to read on such an entire replication. Accordingly, the independent claims have now been amended so as to specify that each of the data objects contains dynamic elements as well as data (e.g., see applicants' specification at page 8, lines 14-17). The independent claims have also been amended to clarify that updating data in the object comprises replacing a portion of the data contained in an object with data contained in an update – without changing dynamic elements in the object (e.g., see applicants' specification at page 11, line 9 to page 12, line 15).

The Examiner also takes issue with applicants' earlier assertion that Hacherl does not disclose establishing one of a set of duplicating data objects as a master data object. Here, the Examiner refers to the Hacherl master server – and argues that this "in effect" designates data and objects on the master server as a "master." However, there is no

teaching in Hacherl to support this supposition. For example, there may be multiple directory objects on the master server, and Hacherl does not explain how any one particular of those would be considered a "master" data object as is required by the applicants' claimed invention.

With respect to applicants' argument that Hacherl does not address the problem of what happens if more than one update to the same data is received at the same time, the Examiner argues that such is irrelevant because such is not addressed by the claim language.

Of course, in Hacherl, because it is dedicated to a "pull model" (e.g., see claim 7, lines 27, *et seq.*), the problem of possibly receiving concurrent updated data is presumably not encountered. However, applicants' claims do require periodically providing over the network an update of the data contained in the first data object, as well as updating the data contained in the second data object in response to receiving updates over the network – also in the context of establishing one of the data objects as a "master data object" wherein the master data object is responsible for maintaining consistency between the data in the data objects. Claim 23 also requires that when the terminal that happens to maintain the designated master data object becomes unavailable, the claimed

apparatus determine which of the data objects in the set should next become a master data object and then establishes that as the master data object.

Dependent claim 24 requires instructions to maintain data consistency between duplicated objects – in the context, of course, of parent claim 23.

Independent claim 29 requires a method wherein one of the data objects is established as a master data object which maintains consistency between the data in the data objects – and when the terminal maintaining that master data object becomes unavailable, determining which of the data objects in the set should become master data object and then establishing that as the master data object for further operations.

Independent claim 35 also requires a terminal in the network to maintain, *inter alia*, stored information as to which data object is a master data object and responsible for maintaining consistency – in an environment wherein any of the duplicated data objects in the set may be a master data object. Claim 35 also requires when the terminal that maintains the master data object becomes unavailable, then one of the objects in the set is determined to thereafter become the master data object and is established as such.

Independent claim 36 requires, *inter alia*, that updates of data in the data object be periodically provided over the network, that information be stored as to which of the data objects in a set is a master data object responsible for maintaining consistency, wherein

any of the duplicated objects in the set may become a master data object. Claim 36 also requires that when the terminal that happens to maintain the master data object becomes unavailable, then another data object will be determined as the master data object and established as such thereafter.

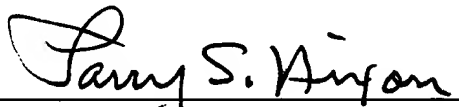
Accordingly, it is respectfully submitted that applicants' claims do, in fact, require maintenance of a single designated master data object responsible for maintaining consistency in a data set. Hacherl naturally does not encounter the problem due to the "pull" mode of operation for data replications. In any event, Hacherl also does not teach or suggest a system wherein a master data object is responsible for maintaining consistency and there are provisions for redesignating a new data object as the "master" should the currently designated master become unavailable. These aspects of the applicants' claims must be given patentable weight and not ignored as if they do not exist in the present claim language.

Accordingly, this entire application is now believed to be in allowable condition, and a formal notice to that effect is earnestly solicited.

Should the Examiner continue to find some objection to allowance of this application, he is respectfully requested to telephone the undersigned for discussion before issuing another office action.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: 
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